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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/835,249	04/13/2001	Yogendra K. Chawla	C34932/118975	5026

7590 01/31/2002
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EXAMINER

NGUYEN, KHANH V

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 01/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/835,249

Applicant(s)

CHAWLA ET AL.

Examiner

Khanh V. Nguyen

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims.

Therefore, the **“bipolar transistor”** in claims 7 and 8 must be shown or the feature(s) canceled from the claim(s).

Therefore, the **“feedback from the drain to the gate terminal”** in claims 18 must be shown or the feature(s) canceled from the claim(s).

No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

Page 11, lines 8, 9, resonant circuit 130 includes Lres and C5. However, page 12, lines 20-22 also refers resonant circuit as a combination of V3 and LCH or (140). This is not clear since page 11, lines 9 10, indicated element (140) as a feed circuit.

Appropriate correction is required.

Claim Objections

Claim 1, 21, 34 are objected to because of the following informalities:

Replace "a filter" with --a first filter--.

Claim 8, line 1, "claim 6" should correctly be --claim 7--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 8 recites the limitation "said bipolar transistor" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what applicant mean by "insulated gate bipolar transistor".

Claims 11, 14, 17, 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 11, 14, it is unclear as to which "first and second low pass filter" applicant is intended.

Regarding claims 17, 18, it is unclear how "a RF source" is a MOSFET transistor.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-6, 9, 12, 13, 17, 21-27, 29, 31, 34-40, 42, 44 are rejected under 35 U.S.C. 102(e) as being anticipated by Pehlke.

Regarding claims 1, 21, 34, Pehlke (Figs. 1 or 4) discloses an amplifier circuit comprising: switching circuit (10) comprises field effect transistors (16, 18, 20, 22) which can be read as a semiconductor devices, each field effect transistor having a control terminal (16a, 18a, 20a, 22a) respectively, two conducting terminals wherein the first conducting terminal coupled to a ground potential and the second conducting terminal coupled to matching network (12); antenna (304) can be read as a RF source coupled to control terminals of semiconductor devices (16, 18, 20, 22) via multiplex (14); a voltage supply (34) together with inductor (32) can be read as a resonant inductor circuit; and a filter (38).

Regarding claims 2-4, 22-24, 35-37, antenna (304) is capable of receiving different signals having different waveforms and the type of wave used is an intended use of the invention.

Regarding claims 5, 6, 26, 27, 39, 40, wherein semiconductor devices are field effect transistors (16, 18, 20, 22). FET and MOSFET are considered the same.

Regarding claims 9, 29, 42, switching devices (10) comprises plurality of FETs (16, 18, 20, 22) connected in parallel wherein FETs can be read as a plurality of discrete transistor.

Regarding claims 12, 13, 25, 31, 38, 44, wherein resonant inductor circuit comprises inductor (32) coupled to voltage supply (34) which can be a DC voltage source and the function would be inherent.

Regarding claim 17, a signal source from an antenna is input to FET transistor which operates in a switch mode.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 10, 11, 14-16, 19, 20, 28, 30, 32, 33, 41, 43, 45, 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pehlke.

Regarding claims 7, 28, 41, it is known in the art that field effect transistor and bipolar transistor can be used interchangeably.

Regarding claims 10, 30, 43, Pehlke discloses the claimed invention except that the transistors are arranged in a KPT configuration. However, such configuration would be considered matter of design choice to meet the system requirement.

Regarding claims 11, 14, 15, 32, 33, 45, 46, Pehlke discloses the claimed invention except a second filter having connection as claimed. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an additional filter since an additional filter would only enhance the circuit ie. filter out noise or filter out unwanted signals etc.

Regarding claim 16, col. 5, lines 65-67, Pehlke discloses uses voltage standing wave ratio (VSWR).

Regarding claims 19, 20, the output of a RF signal source is either fixed or varies depend on the circuit design and the intended use of the invention.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following U.S. Patents contain teaching of a switching amplifier:

Mitzlaff (4,717,884); Nojima et al. (5,146,178)

Kriz et al. (5,818,880); Nair et al. (5,939,941)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh V. Nguyen whose telephone number is (703) 306-9058. The examiner can normally be reached on 8-4:30.

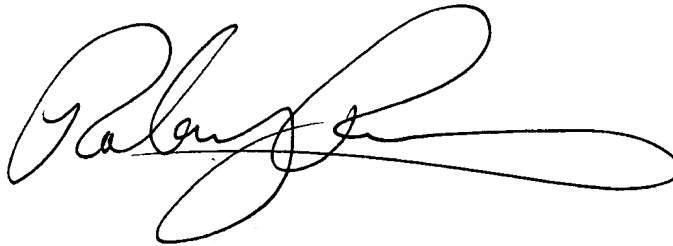
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (703) 308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-0142 for regular communications and (703) 305-0142 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3432.

KDN

01/28/02

A handwritten signature in black ink, appearing to read "Robert Pascal", with a large, stylized flourish extending to the right.